

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Reissue Application of:

Kuei-Ying Lin  
Mark D. Matteucci

U.S. Patent No.: 6,028,183

Issued: February 22, 2000

Serial No.: 08/966,392

Group Art Unit: 1623

Filing Date: November 7, 1997

Examiner: J. Wilson

For: Pyrimidine Derivatives and Oligonucleotides Containing Same

Assistant Commissioner for Patents  
Washington, DC 20231

COMBINED REISSUE APPLICATION DECLARATION AND POWER OF  
ATTORNEY BY INVENTOR(S)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;  
and

I verily believe that I am the original, first and sole inventor (if only one name is listed below), or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed in letters patent number 6,028,183 granted on February 22, 2000, and in the foregoing specification and for which invention I solicit a reissue patent;

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

I acknowledge the duty to disclose all information known to be material to the patentability of this application in accordance with 37 C.F.R. § 1.56.

☐ In compliance with this duty attached herewith is an Information Disclosure Statement in accordance with 37 C.F.R. § 1.97.

DOCKET NO. : GLIS-0144

PATENT

STATEMENT OF INOPERATIVENESS OR INVALIDITY OF ORIGINAL PATENT  
37 C.F.R. §1.175

That I believe the original patent to be

☒ partly

☐ wholly

inoperative or invalid by reason of

☒ a defective ☒ specification, ☐ drawing, ☐ both

☐ said patent claiming

☐ more

☐ less

than patentee had a right to claim.

The scope of the claims of the original patent

☐ are enlarged

☒ are not enlarged

by this reissue application.

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Sir:

**CONSENT OF ASSIGNEE FOR REISSUE  
and  
ASSIGNEE'S STATEMENT OF OWNERSHIP INTEREST IN REISSUE<sup>1</sup>**

I. In accordance with 37 CFR §1.172(a), **ISIS Pharmaceuticals, Inc.**, assignee of the entire interest in U.S. Patent No. **6,028,183**, granted on February 22, 2000 to inventor(s) **Kuei-Ying Lin and Mark D. Matteucci**, hereby consents to reissue of said patent for the reasons set forth in the accompanying Reissue Declaration.

II. In accordance with 37 CFR §1.172(a), said assignee of the entire interest in United States Patent No. **6,028,183**, hereby establishes assignee's ownership of said patent and its right to take action therein under 37 CFR §3.73(b) by:

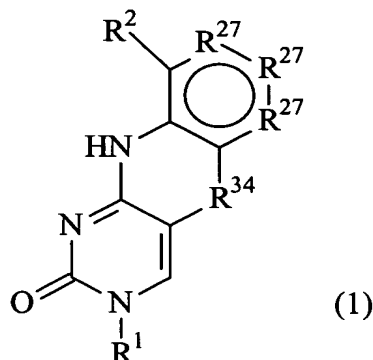
☒ specifying that evidence of said ownership is recorded in the Office for each

assignment in the chain of title at Reel 011211 , Frame 0719 .

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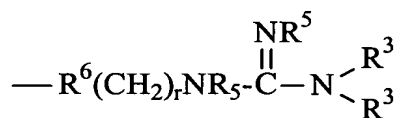


Claims 3, 4, and 15 of U.S. Patent No. 6,028,183 (the 183 patent) erroneously contain substituent moieties that are technically incorrect. Claim 3, which depends on claim 1, is directed to a compound of the formula:



wherein  $R^2$  is defined as, among other things, the group  $-R^6-(CH_2)_tNR^5C(NR^5)(NR^3)_2$  (*see*, the 183 patent at column 79, lines 1-2). The substituent group, as written, however, contains an insufficient number of chemical bonds to the nitrogen atoms due to the inadvertent misplacement of the parenthesis associated with the group  $(NR^3)_2$ . The recited structure is technically incorrect, as several of the nitrogen atoms are divalent.

Applicants have addressed this problem by amending claim 3 to recite the terminal portion of the  $R^2$  substituent as  $N(R^3)_2$ . This amendment assures that the substituent contains the intended terminal guanidine functionality:  $NR^5C(NR^5)N(R^3)_2$ . The technically correct  $R^2$  substituent may be represented structurally as:



Claims 4, 14, 15 also contain the inadvertent misplacement of the parenthesis associated with  $NR^5C(NR^5)N(R^3)_2$ . For example, claim 4 recites, among other things, the groups  $-O-(CH_2)_tNR^5C(NR^5)(NR^3)_2$ ,  $-R^6-(CH_2)_t-NR^5C(NR^5)(NR^3)_2$ , and  $-CH_2-(CH_2)_t-NR^5C(NR^5)(NR^3)_2$ . Accordingly, Applicants have amended claim 4 to replace these structures with  $-O-(CH_2)_tNR^5C(NR^5)N(R^3)_2$ ,  $-R^6-(CH_2)_t-NR^5C(NR^5)N(R^3)_2$ , and  $-CH_2-(CH_2)_t-NR^5C(NR^5)N(R^3)_2$ , respectively. Claim 14 recites the group  $-R^6-(CH_2)_tNR^5C(NR^5)(NR^3)_2$ . Applicants have amended claim 14 to replace this structure with  $-R^6-(CH_2)_tNR^5C(NR^5)N(R^3)_2$ . Claim 15 recites, among other things, the groups  $-O-(CH_2)_tNR^5C(NR^5)(NR^3)_2$ ,  $-R^6-(CH_2)_t-NR^5C(NR^5)(NR^3)_2$ , and  $-CH_2-(CH_2)_t-NR^5C(NR^5)(NR^3)_2$ . Applicants have amended claim 15 to replace these structures with  $-O-(CH_2)_tNR^5C(NR^5)N(R^3)_2$ ,  $-R^6-(CH_2)_t-NR^5C(NR^5)N(R^3)_2$ , and  $-CH_2-(CH_2)_t-NR^5C(NR^5)N(R^3)_2$ , respectively.

Claims 4, 5, 14, and 15, as amended herein, are fully commensurate with the disclosure of the 183 patent as well as the underlying 392 application. The error being corrected in this reissue application up to the time of filing of this declaration under 37 C.F.R. §1.175(a) arose without any deceptive intention on the part of the applicants and/or patentees.

**OFFER TO SURRENDER ORIGINAL PATENT 37 C.F.R. §1.178**

Applicant hereby offers to surrender the original patent, the reissue of which is sought herein.

**POWER OF ATTORNEY**

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: **John W. Caldwell** and **Joseph Lucci**, Registration Nos. **28,937** and **33,307** of the firm of **WOODCOCK WASHBURN LLP**, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103.

☒ Attached as part of this declaration and power of attorney is the authorization of the above named attorney(s) to accept and follow instructions from my representative.

Address all telephone calls and correspondence to:

**Joseph Lucci**  
**WOODCOCK WASHBURN LLP**  
 One Liberty Place - 46th Floor  
 Philadelphia, PA 19103  
 Telephone No. **215-568-3100**.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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DOCKET NO. : GLIS-0144

PATENT

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